

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (Currently Amended): A method of manufacturing a transversely aligned web in which filaments are aligned in a transverse direction, comprising the steps of:

preparing a spinning means including a plurality of nozzles arranged in parallel with a machine direction of a conveyer for extruding molten polymer in the form of filaments, a high-speed fluid blowing unit for blowing a high-speed fluid in a direction parallel with an extruding direction of the filaments to thereby attenuate the filaments extruded from said plurality of nozzles, and at least one air stream vibrating means for cyclically changing a flowing direction of the high-speed fluid blown from said high-speed fluid blowing unit toward the direction cross to the machine direction of said conveyer;

extruding the molten polymer in the form of the filaments from said nozzles;

blowing said high-speed fluid to attenuate the filaments extruded from said nozzles by a frictional force applied by said high-speed fluid; and

changing cyclically the flowing direction of said high-speed fluid by said air stream vibrating means to thereby while cyclically changing a movement of said filaments in the direction cross to said machine direction, accumulating said filaments onto said conveyer, wherein the air stream vibration means includes a ~~wall surface of which a distance and a direction against the high-speed fluid cyclically changes~~ member which rotates or swings around an axis parallel with the machine direction of the conveyer.

Claim 2 (Original): The method of manufacturing a transversely aligned web according to claim 1, wherein said step of preparing said air stream vibrating means includes

disposing a pair of air stream vibrating means to be opposed to one another while being spaced apart from one another in a direction cross to the machine direction of said conveyor, and wherein said step of extruding the filaments includes extruding the filaments in a region between said pair of air stream vibrating means.

Claim 3 (Previously Presented): The method of manufacturing a transversely aligned web according to claim 1, further comprising a step of circulating said high-speed fluid blown from said high-speed fluid blowing unit in a passageway different from the passageway of said high-speed fluid from said spinning means to said conveyor.

Claim 4 (Previously Presented): The method of manufacturing a transversely aligned web according to claim 3, wherein said step of blowing said high-speed fluid includes blowing a hot air having a temperature higher than the melting temperature of said filaments toward said high-speed fluid at a position upstream of said air stream vibrating means with respect to the flowing direction of said high-speed fluid.

Claim 5 (Previously Presented): The method of manufacturing a transversely aligned web according to claim 1, further comprising a step of spraying a liquid on said high-speed fluid to thereby cool said high-speed fluid.

Claim 6 (Previously Presented): The method of manufacturing a transversely aligned web according to claim 1, further comprising a step of stretching the web composed of the filaments piled on said conveyor in a transverse direction of said web.

Claims 7-16 (Cancelled)

Claim 17 (Previously Presented): The method of manufacturing a transversely aligned web according to Claim 1, wherein the filaments extend continuously from one edge to the other edge in the width direction of the transversely aligned web.

Claim 18 (Previously Presented): The method of manufacturing a transversely aligned web according to Claim 6, wherein said step of stretching the web includes nipping both edges of the web.

Claim 19 (Previously Presented): The method of manufacturing a transversely aligned web in which filaments are aligned in a transversely direction, comprising the steps of:

preparing a spinning means having a plurality of nozzles arranged in parallel with an machine direction of a conveyer for extruding molten polymer in the form of filaments and a high-speed fluid blowing unit for blowing a high speed fluid in a direction parallel with the extruding direction of the filaments to thereby attenuate the filaments extruded from said nozzles, and at least one air stream vibrating means for cyclically changing the flowing direction of the high speed fluid blown from said high-speed fluid blowing unit toward the direction cross to the machine direction of said conveyer;

extruding the molten polymer in the form of the filaments from said nozzles;

blowing said high-speed fluid to attenuate the filaments extruded from said nozzles by a frictional force applied by said high-speed fluid; and

changing cyclically the flow direction of said high-speed fluid by said air stream vibrating means to thereby while cyclically changing a movement of said filaments in the direction cross to said machine direction, accumulating said filaments onto said conveyer,

wherein the air stream vibrating means includes a rod-shaped body including an elliptical cross-section and which rotates for cyclically changing the flowing direction of the high-speed fluid.

Claim 20 (Previously Presented): The method of manufacturing a transversely aligned web according to Claim 19, wherein said step of preparing said air stream vibrating means includes disposing a pair of air stream vibrating means to be opposed to one another while being spaced apart from one another in a direction cross to the machine direction of said conveyor, and wherein said step of extruding the filaments includes extruding the filaments in a region between said pair of air stream vibrating means.

Claim 21 (Previously Presented): The method of manufacturing a transversely aligned web according to Claim 19, further comprising a step of circulating said high-speed fluid blown from said high-speed fluid blowing unit in a passageway different from the passageway of said high-speed fluid from said spinning means to said conveyor.

Claim 22 (Previously Presented): The method of manufacturing a transversely aligned web according to Claim 21, wherein said step of blowing said high-speed fluid includes blowing a hot air having a temperature higher than the melting temperature of said filaments toward said high-speed fluid at a position upstream of said air stream vibrating means with respect to the flowing direction of said high-speed fluid.

Claim 23 (Previously Presented): The method of manufacturing a transversely aligned web according to Claim 19, further comprising a step of spraying a liquid on said high-speed fluid to thereby cool said high-speed fluid.

Claim 24 (Previously Presented): The method of manufacturing a transversely aligned web according to Claim 19, further comprising a step of stretching the web composed of the filaments piled on said conveyor in a transverse direction of said web.

Claim 25 (Previously Presented): The method of manufacturing a transversely aligned web according to Claim 19, wherein the filaments extend continuously from one edge to the other edge in the width direction of the transversely aligned web.

Claim 26 (Previously Presented): The method of manufacturing a transversely aligned web according to Claim 24, wherein said step of stretching the web includes nipping both edges of the web.